

3-D RENDERING ENGINE WITH EMBEDDED MEMORY

ABSTRACT OF THE DISCLOSURE

A 3-D rendering engine with embedded memory a graphics engine. A graphics engine is disclosed that includes a rendering engine for receiving graphics primitives and converting them to pixel information for transfer to a display, The rendering engine is operable to access memory locations with multiple memory access requests for a Read or a Write operation and operable in a first address space. A plurality of memory blocks are provided , each individually accessible and all configured in a virtual address space different than said first address space. A memory mapping device is provided for mapping each of the memory requests to the virtual address space. A pipeline engine is operable to pipeline the mapped memory access requests for both Read and Write operations in accordance with a predetermined pipelining scheme. The memory access requests are received in parallel and processed asynchronously, such that access to more than one of the memory blocks can occur at substantially the same time.